Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A method for communicating data within measurement traffic, the method comprising:

sending a plurality of one or more measurement packets over a plurality of one or more paths, each of the plurality of one or more paths traversing at least a portion of an internetwork, and each of the plurality of one or more measurement packets including:

information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet, and data including control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver, the data further including one or more of measurement statistics, a generic communication channel, and network information.

Claim 2 (original): The method of claim 1, wherein the measurements of performance characteristics include one-way measurements.

Claim 3 (original): The method of claim 1, wherein the data includes measurement statistics.

Claim 4 (previously presented): A method for communicating data within measurement traffic, the method comprising:

receiving a plurality of one or more measurement packets over a plurality of one or more paths, each of the plurality of one or more paths traversing at least a portion of an internetwork, and each of the plurality of one or more measurement packets including:

information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet, data including control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver, the data further

including one or more of measurement statistics, a generic communication channel, and network information.

Claim 5 (original): The method of claim 4, wherein the measurements of performance characteristics include one-way measurements.

Claim 6 (original): The method of claim 4, wherein the data includes measurement statistics.

Claim 7 (original): The method of claim 4, further comprising analyzing of the measurement packet based on a dynamic algorithm, the dynamic algorithm computing computed statistics on one or more of the measurements of performance characteristics of at least a portion of the path of the measurement packet.

Claim 8 (original): The method of claim 7, wherein a subset of the plurality of one or more paths is selected based at least in part on at least one of: one or more of the measurement statistics from the measurement packet and one or more of the computed statistics.

Claim 9 (previously presented): A method for communicating data within measurement traffic, the method comprising:

sending a first plurality of one or more measurement packets over a first plurality of one or more paths, each of the first plurality of one or more paths traversing at least a portion of an internetwork, and each of the first plurality of one or more measurement packets including:

information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet, and

data including control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver, the data further including one or more of measurement statistics, a generic communication channel, and network information,

receiving a second plurality of one or more measurement packets over a second plurality of one or more paths, each of the second plurality of one or more paths traversing at least a portion of an internetwork, and each of the second plurality of one or more measurement packets including:

information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet, and

data including control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver, the data further including one or more of measurement statistics, a generic communication channel, and network information.

Claim 10 (original): The method of claim 9, wherein the measurements of performance characteristics include one-way measurements.

Claim 11 (original): The method of claim 9, wherein the data includes measurement statistics.

Claim 12 (original): The method of claim 11, wherein the measurement statistics are at least partly responsive to jitter.

Claim 13 (original): The method of claim 11, wherein the measurement statistics are at least partly responsive to delay.

Claim 14 (original): The method of claim 11, wherein the measurement statistics are at least partly responsive to loss.

Claim 15 (canceled)

Claim 16 (original): The method of claim 9, wherein the data includes a generic communication channel.

Claim 17 (original): The method of claim 9, wherein the data includes network information.

Claim 18 (original): The method of claim 9, wherein the data is embedded in multiple measurement packets that are sent over multiple paths for improved communication performance, including redundancy and shorter transmission time.

Claim 19 (original): The method of claim 9, wherein the measurement packets are at least one of encrypted and digitally signed.

Claim 20 (original): The method of claim 9, wherein a clock referred to by a sender of the measurement packet and a clock referred to by the receiver of the measurement packet are synchronized, the synchronization methods including at least one or more of GPS, NTP, IRIG, and NIST.

Claim 21 (original): The method of claim 9, further comprising analyzing of the measurement packet based on a dynamic algorithm, the dynamic algorithm computing computed statistics on one or more of the measurements of performance characteristics of at least a portion of the path of the measurement packet.

Claim 22 (original): The method of claim 21, wherein the algorithm computes averages of the measurements, including at least one of a moving average, an average based on the Robbins-Moro estimator, a window-based average, and a bucket-based average.

Claim 23 (original): The method of claim 21, wherein the algorithm is at least partly specified through an external API.

Claim 24 (original): The method of claim 21, wherein the computed statistics are at least partly recomputed upon the arrival of every measurement packet.

Claim 25 (previously presented): The method of claim 21, wherein the computed statistics are based at least partly on measurement statistics from the measurement packet.

Claim 26 (original): The method of claim 21, wherein a subset of the plurality of one or more paths is selected based at least in part on at least one of: one or more of the measurement statistics from the measurement packet and one or more of the computed statistics.

Claim 27 (original): The method of 26, wherein the selection of the subset of the plurality of one or more paths is based at least partly on the position of paths in a ranking.

Claim 28 (original): The method of 27, wherein the ranking is at least partly based on one or more of the measurement statistics included as data in the measurement packet.

Claim 29 (original): The method of 26, wherein the selection of the subset of the plurality of one or more paths is based at least partly on a probability associated with each path of the plurality of one or more paths.

Claim 30 (original): The method of claim 29, wherein the probability of each path of the plurality of one or more paths is at least partly based on one or more of the measurement statistics included as data in the measurement packet.

Claim 31 (previously presented): The method of claim 26, wherein the selection of the subset of the plurality of one or more paths is based at least partly on applying one or more thresholds to at least one of the measurement statistics included as data in the measurement packet.

Claim 32 (original): The method of claim 9, wherein measurement packets at least partly rely on UDP.

Claim 33 (original): The method of claim 9, wherein at least one of the plurality of one or more paths is at least partly implemented with at least one of a GRE tunnel and an IPSEC tunnel.

Claim 34 (original): The method of claim 9, wherein at least one of the plurality of one or more paths is at least partly implemented with at least one of a frame relay PVC, an ATM PVC, and MPLS.

Claim 35 (previously presented): The method of claim 9, wherein the internetwork is a plurality of one or more subnetworks, including at least one of a plurality of one or more VPNs; an overlay network; a plurality of one or more BGP autonomous systems; a plurality of one or more local area networks; a plurality of one or more metropolitan area networks; and a plurality of one or more wide area networks.

Claim 36 (original): The method of claim 9, wherein the measurement packet sizes and times between measurement packets simulate the traffic pattern of a plurality of one or more applications.

Claim 37 (previously presented): The method of claim 36, wherein the plurality of one or more applications includes voice applications.

Claim 38 (previously presented): The method of claim 36, wherein the plurality of one or more applications includes video applications.

Claim 39 (previously presented): A networking system, comprising:

a plurality of one or more devices communicating at least a first plurality of one or more measurement packets over a first plurality of one or more paths, each of the first plurality of one or more paths traversing at least a portion of an internetwork, and each of the first plurality of one or more measurement packets including:

information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet, and

data including control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver, the data further including one or more of measurement statistics, a generic communication channel, and network information.

Claim 40 (original): The networking system of claim 39, wherein the plurality of one or more devices includes a first sub-plurality of one or more devices, wherein the first sub-plurality of one or more devices sends one or more of the first plurality of one or more measurement packets.

Claim 41 (previously presented): The networking system of claim 40, wherein the plurality of one or more devices includes a second sub-plurality of one or more devices, wherein the second sub-plurality of one or more devices receives one or more of a second plurality of one or more measurement packets over a second plurality of one or more paths, each of the second plurality of one or more paths traversing at least a portion of the internetwork, each of the second plurality of one or more measurement packets including:

information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet, and

data including one or more of measurement statistics, a generic communication channel, network information, and control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver.

Claim 42 (original): The networking system of claim 41, wherein at least one of the first plurality of one or more measurement packets and at least one of the second plurality of one or more measurement packets are the same packet.

Claim 43 (original): The networking system of claim 39, wherein at least one of the plurality of one or more devices receives one or more of the first plurality of one or more measurement packets.

Claim 44 (previously presented): The networking system of claim 39, wherein the plurality of one or more devices includes a first sub-plurality of one or more devices, wherein the first sub-plurality of one or more devices receives one or more of a second plurality of one or more measurement packets over a second plurality of one or more paths and sends one or more of the first plurality of one or more measurement packets, each of the second plurality of one or more paths traversing at least a portion of the internetwork, each of the second plurality of one or more measurement packets including:

information for a receiver of the measurement packet to compute measurements of performance characteristics of at least a portion of the path of the measurement packet, and

data including one or more of measurement statistics, a generic communication channel, network information, and control data directing a receiver of the measurement packet to change one or more configuration parameters of the receiver.

Claim 45 (original): The networking system of claim 44, wherein at least one of the first plurality of one or more measurement packets and at least one of the second plurality of one or more measurement packets are the same packet.

Claim 46 (original): The networking system of claim 44, wherein the plurality of one or more devices includes a second sub-plurality of one or more devices, wherein the second sub-plurality of one or more devices sends one or more of the first plurality of one or more measurement packets.

Claim 47 (original): The networking system of claim 46, wherein at least one of the first plurality of one or more measurement packets and at least one of the second plurality of one or more measurement packets are the same packet.

Claim 48 (original): The networking system of claim 44, wherein the plurality of one or more devices includes a second sub-plurality of one or more devices, wherein the second sub-plurality of one or more devices receives one or more of the second plurality of one or more measurement packets.

Claim 49 (original): The networking system of claim 48, wherein at least one of the first plurality of one or more measurement packets and at least one of the second plurality of one or more measurement packets are the same packet.

Claim 50 (previously presented): The method of claim 1, wherein the data comprise measurement statistics that include delay and jitter averages that are combined into a single value.

Claim 51 (currently amended): The method of claim 1, wherein the control data sent from the sender to the receiver ~~instructs~~ is configured to instruct the receiver to initiate sending one or more measurement packets, to change one or more of the measurement packet sizes, inter-measurement packet transmission times and mix of packet sizes, and to stop sending one or more of the plurality of measurement packets.

Claim 52 (new): The method of claim 1, wherein the data comprises network information retrieved from network routers, wherein the network information comprises one or more of in-bound link utilization, out-bound link utilization, in-bound link bandwidth, out-bound link bandwidth, and CPU utilization.

Claim 53 (new): The method of claim 9, wherein the sending and receiving are performed on a single device configured to change the one or more configuration parameters in response to receiving control data.

Claim 54 (new): The method of claim 9, wherein the measurement statistics are at least partly responsive to jitter, delay, and loss.